Cooperative Extension Service
C/T/A/H/R
College of Tropical Agriculture & Human Resources
University of Hawaii at Manoa

Horticulture Research Note
June 1997
HRN-2

Vegetative Propagation of Alahee

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Objective

The purpose of this trial was to determine the effect of treatments with a commercial root-promoting product on the rooting of alahee.

Alahee (*Canthium odoratum* [G. Forster] Seem.) is a native Hawaiian plant which has desirable characteristics for tropical landscapes but is difficult to propagate from cuttings (Bornhorst and Rauch 1994). Little information is available on treatments that might enhance the rooting of this plant.

Methods

Uniform, terminal, 4-inch long cuttings of alahee were taken in February from a planting on the UH-Manoa campus. A commercial root-promoting product (Dip'n Grow), which contains 1.0% IBA and 0.5% NAA, was used. The five treatments (Dip'n Grow at 1:1, 1:5, 1:10, and 1:20 dilutions and an untreated control), with 10 cuttings per treatment, were replicated 10 times in a randomized complete block design. The cuttings were placed in vermiculite in 34 cm x 50 cm metal flats in the UH-Manoa Magoon Shade House under intermittent mist (6 sec/2 min cycle).

Dip'n Grow was diluted with water to give the desired concentrations of the chemical. The quick-dip method of application was employed, in which the basal ends of cuttings were dipped in solution for five seconds (Hartmann et al. 1990).

Rooting was evaluated after five months by determining the rooting percentage and the root quality by the method of ranks described by O'Rourke and Maxon (1948) and verified by Mahlstede and Lana (1958). An index number was determined for each treatment by dividing the sum of scores for each cutting (5 = heavily rooted, 4 = medium rooted, 3 = lightly rooted, 2 = no roots, and 1 = dead) by the number of cuttings.

Results

There was no significant difference among treatments under the conditions of this experiment in rooting percentage and root quality. It appears that some other factor besides auxin concentration is limiting the rooting of alahee cuttings.

Literature cited

Bornhorst, H.L., and F.D. Rauch. 1994. Native Hawaiian plants for landscaping, conservation, and reforestation. Univ. of Hawaii, HITAHR Res. Ext. Series 142.

Hartmann, H.T., D.E. Kester, and F.T. Davies, Jr. 1990. Plant propagation: principles and practices. Prentice- Hall, Inc., Englewood Cliffs, New Jersey.

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O'Rourke, F.L., and M.A. Maxon. 1948. Effect of particle size of vermiculite media on the rooting of cuttings. Proc. Amer. Soc. Hort. Sci. 51:654–656.

Table 1. The influence of Dip'n Grow on rooting of alahee terminal cuttings after five months.

Dip'n Grow (dilutions)	IBA (ppm)	Rooting percentage	Root quality[x]
control	—	4	1.3 a[y]
1:20	500	5	1.4 a
1:10	1000	7	1.5 a
1:5	2000	7	1.4 a
1:1	5000	7	1.3 a

[x]Rooting index: 1 = dead, 5 = heavy rooting.
[y]Mean separation by Duncan's multiple range test, 5% level.

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